

REMARKS

A. Request for Reconsideration

Applicants have carefully considered the matters raised by the Examiner in the outstanding Office Action but remain of the position that patentable subject matter is present. Applicants respectfully request reconsideration of the Examiner's position based on the amendments to the claims and the following remarks.

B. The Invention

The present invention is directed to a silver salt photothermographic material and an image forming method using the same.

In one of the novel aspects of the invention, the photothermographic material is composed of a reducing agent of formula (1) and a hindered phenol compound of formula (3). The Inventors have discovered that the photothermographic material of the invention exhibits enhanced sensitivity, high maximum density, improved fogging and minimized deterioration over time.

C. Claim Amendments

Claims 2-9 and 15-18 are presented for further prosecution. Claims 1 and 10-14 have been cancelled by this amendment. As a result of the cancellation of claim 1, claims 2-9 have been amended to be ultimately dependent upon claim 15.

Claim 15 is a combination of claim 1 and claim 11. Claim 15 is an independent claim upon which all other claims now ultimately depend.

D. Prior Art Rejection based on Oya

Claims 1-10, 13 and 15-17 had been rejected as being anticipated by or unpatentable over Oya (US 2001/0051319).

Oya had been cited to teach a photothermographic material having a compound of formula (1) and a compound of formula (2) of claim 1.

Since claim 11 had not been rejected based on Oya, and since claim 11 had been dependent upon claim 1, it is submitted that claim 1 and claim 11 are patentable over Oya. Claim 15 is a combination of claim 1 and claim 11, thus, it is submitted that claim 15 is patentable over Oya.

Since the remaining claims, claims 2-4, 7-9 and 16-18 ultimately depend upon claim 15, it is submitted that all the claims are patentable over Oya.

It is noted that Oya had been cited against claim 15. Claim 15, like claim 11, recites a compound of formula (3). It is also noted that the Examiner did not cite a specific portion of Oya to teach the compound of formula (3).

Applicants have studied the teachings of Oya, and note that Oya teaches a phenol compound of formula (2) in par. 13. In the phenol compound of Oya, Oya broadly teaches that R^1 , R^2 , X^1 , X^2 and X^3 are either a hydrogen atom or a substituent.

The hindered phenol compound of formula (3) of claim 15 differs from the phenol compound disclosed in par. 13 of Oya for at least three reasons: a) formula (3) of claim 15 contains two hydroxy groups at opposite ends of the molecule; b) R_{33} and R_{34} in formula (3) of claim 15 must be an alkyl or cycloalkyl; and c) the bridging group "L" in formula (3) of claim 15 must be -S- or -CHR₃₅. Applicants therefore respectfully submit that Oya does not teach formula (3) of claim 15.

In addition, Applicants note that exemplary compounds II-1 to II-118 at pages 7-25 of Oya do not fall within the scope of formula (3) of claim 15. Each of the 118 compounds of Oya does not satisfy the a), b) and c) limitations discussed above. The closest compounds of Oya do not satisfy a), b) and c), for example, compound II-66 at page 17 of Oya does not meet the limitations of "L" of formula (3) of claim 15. Compounds II-115 and II-116 at pages 24-25 of Oya do not contain two hydroxy

groups. In addition, the remaining compounds are even further removed from formula (3) of claim 15.

Furthermore, claim 17 defines R_{35} which appears in "L" of formula (3) of claim 15. Claim 17 recites that R_{35} is a hydrogen atom, thus, "L" of formula (3) of claim 15 is $-\text{CH}_2-$.

Exemplary compounds II-1 to II-118 at pages 7-25 of Oya do not contain a $-\text{CH}_2-$ linking group as recited in claim 17. Compound II-66 at page 17 contains a $-\text{CO}-$ linking group at the "L" position. Similarly, compound II-87, compound II-97, compound II-108, compound II-115, compound II-117 and compound II-118 of Oya do not contain a $-\text{CH}_2-$ linking group at the "L" position of formula (3) of claim 15.

Applicants therefore respectfully submit that formula (3) of claim 15 is neither taught or suggested in Oya.

E. Prior Art Rejection based on Fukui and PS '266

Claims 1-18 had been rejected as being unpatentable over Fukui (US 2002/0102502) in view of PS '266.

As noted above, claims 1 and 10-14 have been cancelled and all the claims are now dependent upon claim 15. Claim 15 requires both a reducing agent of formula (1) and a compound of formula (3).

Fukui had been cited to teach a photothermographic material having compounds of formula (1) and formula (3) of claim 15 (see Formula (I) in par. 25 of Fukui and Formula (III) in par. 65 of Fukui). The Examiner had recognized that the linking group of the reducing agent of formula (I) in par. 25 of Fukui differs from the linking group of formula (1) of claim 1, since "R¹³" of Formula (I) of Fukui does not include a ring group. Thus, Formula (I) at page 15 of PS '266 had been cited to teach that "R¹³" can be a ring group (see R³ and R⁴ substituents of Formula (I) of PS '226).

Applicants had previously submitted the March 2005 Declaration of Mr. Fukusaka to demonstrate the superiority of the linking group of formula (3) of claim 15 compared to the many linking groups disclosed by Fukui and PS '266.

In Tables 4 and 5 at page 6 of the March 2005 Declaration, Mr. Fukusaka demonstrated the superiority of Inventive Samples 4 and 6 compared to Comparative Samples 3 and 5 in terms of sensitivity, maximum density, fogging and stability. The compositions of Inventive Samples 4 and 6, as well as Comparative Samples 3 and 5 is explained in sections 8-9 of the March 2005 Declaration.

In section 9 of the outstanding Office Action, the Examiner had criticized the March 2005 Declaration for three reasons. First, the Examiner had criticized the data in Tables 4 and 5 of the Declaration since the evaluation method described at page 6, lines 2-3 of the Declaration was not the evaluation method described in par. 400 of Fukui. Second, the Examiner had criticized the Declaration since the fog values for Inventive Samples 4 and 6 in Tables 3 and 4 are similar to the fog values in Table 3 at page 38 of Fukui. Third, the Examiner had criticized the Declaration since the sensitivity values for Inventive Samples 4 and 6 show little improvement over the sensitivity values in Table 3 of Fukui. Each of these criticisms will be addressed in turn.

1. The evaluation method of Fukui and the evaluation method of the March 2005 Declaration

Applicants respectfully disagree with the Examiner's criticism of the evaluation method of the March 2005 Declaration.

Applicants believe that it is irrelevant that Fukui teaches one evaluation method while the Declaration employs a different evaluation method. A fair comparison between the material of Fukui and the claimed material only requires that both materials are evaluated in the same manner. It does not matter whether

the evaluation method of Fukui or the evaluation method of the invention is chosen, what matters is whether the same evaluation method is used to evaluate both the material of Fukui and the claimed material.

Applicants therefore respectfully submit that the March 2005 Declaration made a fair comparison between the material of Fukui and the claimed material. Applicants believe that the evaluation method of Fukui did not have to be employed. The important point is that both the material of Fukui and the claimed material were evaluated using the same technique in the March 2005 Declaration. Since the same technique was used, the results can be accurately compared.

Applicants believe that the March 2005 Declaration made a fair comparison between the material of Fukui and the claimed material, even though the evaluation method of Fukui was not employed. Applicants respectfully submit that the March 2005 Declaration demonstrates the patentability of the present invention.

2. The fog values in Table 3 of Fukui and the fog values in Tables 4-5 of the March 2005 Declaration

Applicants respectfully disagree with the Examiner's criticism of the March 2005 Declaration concerning the fog values in Table 3 of Fukui and the fog values for Inventive

Samples 4 and 6 in Tables 4 and 5 of the Declaration. In this criticism, the Examiner had noted that Table 3 at page 38 of Fukui shows fog values of 0.15, while Inventive Samples 4 and 6 also show fog values of 0.18.

Applicants note that fog is a property of a photothermographic material that may vary depending on the type of evaluation method. For instance, a material may exhibit a first fog value when evaluated in a first manner, and the identical material may exhibit a different fog value when evaluated in a different manner.

As discussed in section 4a above, the evaluation method in par. 400 of Fukui was not the evaluation method employed in the March 2005 Declaration. Thus, the fog values in Table 3 of Fukui are specific to the evaluation method of Fukui, while the fog values in Tables 3 and 4 of the March 2005 Declaration are specific to the evaluation method of the Declaration.

Applicants believe that the Examiner cannot accurately compare the fog values of Table 3 of Fukui with the fog values of Tables 4 and 5 of the March 2005 Declaration, since the fog values of Fukui and the fog values of the Declaration were evaluated in different manners. Instead, the comparison should be made between the fog values of Inventive Sample 4 with Comparative Sample 3 in Table 4 of the March 2005 Declaration,

and with Inventive Sample 6 and Comparative Sample 5 in Table 5 of the March 2005 Declaration.

When comparing the Inventive Samples of the Declaration with the Comparative Samples of the Declaration, it can be seen that fog was reduced in the Inventive Samples. Thus, Mr. Fukusaka had demonstrated that fog is improved in the present invention.

Applicants respectfully submit that the fog values in Table 3 of Fukui should not be considered. Rather, Applicants believe that the comparison should be made between the Inventive Samples and the Comparative Samples of the Declaration. Based on this comparison, Applicants respectfully submit that the March 2005 Declaration demonstrates the patentability of the present invention.

3. The sensitivity values in Table 3 of Fukui and the sensitivity values in Tables 4-5 of the Declaration

Applicants respectfully disagree with the Examiner's criticism of the March 2005 Declaration concerning the sensitivity values in Table 3 of Fukui and the sensitivity values for Inventive Samples 4 and 6 in Tables 4 and 5 of the Declaration.

Sensitivity in Table 3 of Fukui was determined as a relative value based on the sensitivity of Sample 1 (par. 401). Thus, Fukui determined that Sample 1 in Table 3 has a sensitivity value of 100, and the sensitivities of Samples 2-18 were relative to the sensitivity of Sample 1.

Similarly, the sensitivities of Samples 3 and 5 in Tables 4-5 of the March 2005 Declaration were designated 100, and the sensitivities of Samples 4 and 6 in Tables 4-5 were determined relative to the sensitivities of Samples 3 and 5 (see page 125, lines 4-15 of the application).

Thus, the sensitivities of Samples 2-18 in Table 3 of Fukui were determined relative to the sensitivity of Sample 1 in Table 3 of Fukui. In addition, the sensitivities of Samples 4 and 6 in Tables 4-5 of the March 2005 Declaration were determined relative to the sensitivities of Samples 3 and 5 in Tables 4-5 of the March 2005 Declaration. A proper comparison is therefore between Sample 3 and Sample 4 of the Declaration, between Sample 5 and Sample 6 of the Declaration, and between Samples 2-18 and Sample 1 in Table 3 of Fukui.

When comparing Comparative Sample 3 and Inventive Sample 4 of the Declaration, and when comparing Comparative Sample 5 and Inventive Sample 6 of the Declaration, it can be seen that the sensitivities of Inventive Samples 4 and 6 are superior to the sensitivities of Comparative Samples 3 and 5.

Applicants respectfully submit that the sensitivity values in Table 3 of Fukui should not be considered. Rather, Applicants believe that the comparison should be made between the Inventive Samples and the Comparative Samples of the Declaration. Based on this comparison, Applicants respectfully submit that the March 2005 Declaration demonstrates the patentability of the present invention.

F. The Double Patenting Rejections

Claims 1-18 had been provisionally rejected for obviousness-type double patenting as being unpatentable over claims 1-4 of US App. No. 10/336,920 in view of Fukui; claims 1-14 had been provisionally rejected for obviousness-type double patenting as being unpatentable over claims 1-4 of US App. No. 10/631,910 in view of Fukui; and claims 1-18 had been rejected for obviousness-type double patenting as being unpatentable over claims 1 and 2 of US Pat. No. 6,699,649 in view of Fukui.

Applicants will file terminal disclaimers to overcome the double patenting rejections upon the indication of allowable subject matter in this Application.

G. Conclusion

In view of the foregoing and the enclosed, it is respectfully submitted that the application is in condition for allowance and such action is respectfully requested. Should any extensions of time or fees be necessary in order to maintain this Application in pending condition, appropriate requests are hereby made and authorization is given to debit Account # 02-2275.

Respectfully submitted,

LUCAS & MERCANTI, LLP

By: Donald C. Lucas
Donald C. Lucas, 31,275
Attorney for Applicant(s)
475 Park Avenue South, 15th Floor
New York, New York
Tel. # 212-661-8000

Encl: Return receipt postcard

DCL/mr